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October 13, 2009

Commissioner Gary Pierce
Commissioner Sandra Kennedy
Commissioner Paul Newman
Commissioner Bob Stump

Re: Proposed Commission workshops to address the implementation of a statewide feed-in tariff; adoption of a potential Commission Policy Statement calling on Arizona utilities to reach 25 percent renewable energy by 2025. Docket No. E-01345A-08-0172.¹

Dear Colleagues:

Next month will mark the three year anniversary of the Commission's adoption of the Renewable Energy Standard ("RES"), requiring utilities to produce or purchase 15 percent of their total retail sales from renewable energy resources, such as solar, wind, geothermal or landfill gas.² As we approach this important milestone in the history of the Commission's efforts to achieve lower electricity prices through greater diversity in utility energy portfolios, I believe it is time for the Commission to consider ways we might continue to promote a more economically sustainable and reliable energy future. I write today to propose the following next steps for the Commission's consideration: the adoption of a policy statement encouraging Arizona utilities to achieve 25 percent renewable energy by 2025 and the hosting of workshops to design a statewide feed-in tariff that would further boost solar energy production in Arizona.

In recent months it has become increasingly clear that the state's largest utilities will have no problem meeting the RES, and in the case of one utility, will actually dramatically exceed it by the year 2015.³ At the same time, we are seeing significant decreases in the price of renewable

¹ This letter is being docketed in Docket No. E-01345A-08-0172 because it refers to testimony in that matter.

² Renewable Energy Standard and Tariff rules, Arizona Administrative Code ("A.A.C.") R14-2-1801 through 1816 were approved by the Commission in Decision No. 69127 on October 31, 2006 and certified as constitutional by Attorney General Terry Goddard on June 15, 2007. The rules were further upheld by Maricopa County Superior Court Judge Joseph Heilman in his decision on September 1, 2009 granting summary judgment in favor of the Commission in *Miller v. ACC*. The Commission's experience implementing renewable energy standards actually dates to 1996, when the Commission enacted the Solar Portfolio Standard, followed by the adoption of the Environmental Portfolio Standard in 2001, which governed renewable energy requirements at affected utilities until the implementation of the RES.

³ See Arizona Public Service Company's ("APS") Resource Plan, page 1, stating that "[t]his Resource Plan... will facilitate APS' pursuit of renewable resources above and beyond the Renewable Energy Standard ("RES") requirements"; see also testimony of Barbara Lockwood, in the proposed APS Settlement Agreement, Docket No. E-01345A-08-0172, in which the witness indicates that APS will go beyond the 15 percent called for under the RES. Under questioning by this Commissioner, witness Lockwood stated that APS has undertaken internal analyses to examine whether and how APS could engage in renewable energy production or purchases beyond 15 percent by

energy, particularly in the cost of solar energy, as the proliferation of state renewable portfolio standards and strong customer demand for solar have combined to create a competitive industry and resulting downward pressure on prices. Arizonans have long supported renewable energy – in fact have demanded it – as evidenced by their support of this Commission’s decision to adopt and fight for the RES, by public opinion polls, and by thousands of letters and emails that have been addressed to this Commission over the past decade calling for more sustainable, affordable energy. Perhaps because of the decline in the price of renewable energy and the overwhelming public support for renewables, Arizona Public Service Company (“APS”) and Tucson Electric Power (“TEP”) have each declared their backing for renewable energy, and for making Arizona the “solar energy capital of the world”.⁴

Even as we take stock of the support for, and successes of Arizona’s RES, recent developments in federal energy policy should cause us to consider whether we are doing all we can to shield consumers from potentially sharp upward jolts in the cost of non-renewable sources of electricity. There remains the very real possibility, for instance, that Congress will enact legislation adopting some sort of cap and trade program or carbon tax, policies that would precipitate enormous rate increases for any utility whose energy portfolios remain dominated by carbon-intensive technologies. APS has estimated that the cap and trade program encapsulated in the Waxman-Markey legislation passed this year by the House of Representatives would increase rates between 11 and 41 percent. TEP has indicated that its rates could climb by 25 percent if that legislation is signed into law.⁵ Additionally, the Environmental Protection Agency (“EPA”) appears poised to enact aggressive anti-haze regulations that will prove extremely costly for the owners of two Northern Arizona coal-fired power plants. The EPA recently announced an Advanced Notice of Proposed Rulemaking (“ANPR”) to examine increasing the stringency of the Best Available Retrofit Technology for nitrous oxide (“NOx”) and particulate matter emissions at the Four Corners Coal Plant (“Four Corners”). I was informed by the Salt River Project (“SRP”) and APS that these new regulations, if implemented, could require \$600 million to \$1 billion worth of additional equipment to reduce NOx and particulates, creating costs that would most likely have to be directly passed on to the utility’s customers. Even more alarmingly, APS has stated that the EPA’s ANPR could make Four Corners power “economically unviable” for its customers.⁶ To provide context for the impact

2025, in preparation for a cap and trade reality. Transcript, Volume VII, page 1529. Additionally, the terms of the proposed APS Settlement Agreement would see APS doubling its requirements under the RES by the year 2015 with approximately 10% of retail sales coming from renewable sources. See, proposed APS Settlement Agreement, page 8, Docket No. E-01345A-08-0172.

⁴ See APS Press Release, “APS Solar Tour ’09 Spreads Word of Sun’s Power,” May 22, 2009, stating, “We share a common passion for renewable energy here at APS. The Tour has been a bold step in making Arizona the ‘Solar Capital of the World.’”; See Also TEP Press Release, “TEP Seeks Federal Stimulus Funding for ‘Bright Tucson’ Solar Project,” September 1, 2009, stating, “Solar Energy is going to play a big part in TEP’s future...”

⁵ See April 1, 2009 letter from APS President Don Robinson to Arizona Sen. Jon Kyl.

⁶ In a memo provided to my office and prepared by APS titled “EPA’s Advanced Notice of Proposed Rulemaking on ‘Best Available Retrofit Technology’ (BART) at the Four Corners Power Plant”, the Company states that APS has proposed alternatives to the EPA for mitigating NOx at the Four Corners Power Plant, but declares that if the measures described in the ANPR are required, the plant’s viability could be threatened. “If EPA’s final determination is more stringent than APS’ proposed BART, it will jeopardize the economic viability of the plant.”

that these new rules could have on Arizona ratepayers, APS receives 791 megawatts of power from Four Corners, or 10 percent of all of its power.⁷ As we move into the second decade of the 21st Century, it may simply become too expensive to rely as heavily as we have in the past on coal fired electricity. Indeed, evidence in several cases indicates that renewable energy projects – including utility scale solar – are cost competitive when compared to coal-fired electricity under a cap and trade scenario alone, and these analyses do not take into consideration the additional costs that would result from the EPA’s newly announced ANPR on particulates and NOx.⁸

Even in the unlikely event that Congress never adopts a cap and trade regime, the cost of renewable technologies are sliding rapidly toward price parity with traditional forms of electricity like coal and natural gas. Wind energy has pulled even with the cost of natural gas.⁹ And in the last year alone, the cost of solar modules has decreased 40 percent. Some estimate that price parity for certain forms of solar energy could occur in 2015 while others believe that solar is already at parity.¹⁰ Utilities that are planning to utilize these technologies, and are engaging in research and development of them, provide additional rate protections to their customers.

Fortunately, the opportunity for Arizona utilities to harness renewable resources is at an all-time high. Arizona’s Power Plant and Line Siting Committee, the U.S. Bureau of Land Management, and the State Land Department have all seen an uptick in the number of applicants for their various permits.¹¹ The Western Governor’s Association’s Western Renewable Energy Zones (“WREZ”) process and Arizona’s Renewable Energy Transmission Task Force (“RTTF”) have each identified renewable energy zones that depict tens of thousands of megawatts of available renewable energy in our state.¹² And unlike other states, Arizona would appear to be a place where renewable energy projects are actually coming to fruition. Last week, this Commission approved a 480 megawatt concentrated solar or photovoltaic project to be constructed by

⁷ APS and SRP also would face these new costs at the Navajo Generating Station, from which it receives some power.

⁸ See e.g. October 16, 2008 letter from APS to Commissioner Kris Mayes, page 2, stating that “it is possible that Solana could be either approximately *equivalent to or below* the cost of conventional resources” if cap and trade were passed by Congress. Italics added. Docket No. E-01345A-08-0106.

⁹ See <http://www.awea.org/pubs/factsheets/EconomicsOfWind-Feb2005.pdf>. The American Wind Energy Association states that “...state-of-the-art wind power plants can generate electricity for less than 5 cents/kWh with the Production Tax Credit... a price that is competitive with new coal- or gas-fired power plants.”

¹⁰ The Department of Energy’s Solar America Initiative identified 2015 as the break point for grid parity. See <http://genc.iie.org.mx/genc/fotovoltaiico/pdfs/thesolaramerica.pdf>, page 16. See also <http://e360.yale.edu/content/feature.msp?id=2039>; and <http://www.ecogeek.org/content/view/2400/>. Additionally, a recent report by Mark Bachman showed that a solar plant in Nevada cost \$.075 per kWh without any subsidies, below the cost of conventional generation. See <http://www.greentechmedia.com/articles/read/first-solar-reaches-grid-parity-milestone-says-report-5389/>.

¹¹ The state director of BLM in Arizona, Jim Kenna, has stated that his office has received more than 35 applications for permitting solar projects on BLM land in Arizona.

¹² The WREZ process identified more than 19,000 megawatts of highly developable solar energy in Arizona – more than any other state in the nation. See *Western Renewable Energy Zones – Phase 1 Report*. <http://www.westgov.org/wga/publicat/WREZ09.pdf>.

NextLight Renewable Power, LLC, and sold to a California utility. Arizona utilities are seeing the benefit of the first ever wind project in our state, as 68 megawatts from the Dry Lake Wind Project are now coursing over the state's high voltage power lines for use by SRP customers. Last month, the City of Phoenix announced it has winnowed a short list of bidders for a 175 megawatt solar project to be located at the City's landfill near Buckeye.¹³ And at least one owner of a merchant natural gas plant in Arizona is in the development stages of a solar project that will either provide electricity to an Arizona utility, or be sold to California.¹⁴

The ability of Arizona to produce and consume renewable energy will likely be further enhanced by the Commission's initiatives on renewable energy transmission. The Renewable Energy Transmission Task Force, formed to respond to the Commission's Order in the last Biennial Transmission Assessment, has been meeting regularly under the auspices of the Southwest Area Transmission Short Circuit Working Group ("SWAT"), and is soon slated to deliver a report on the most needed renewable energy transmission lines in Arizona and the financing mechanisms required to build them. In this respect, Arizona is actually leading the West in its efforts to encourage construction of the transmission necessary to deliver renewable energy electrons to load pockets like Phoenix, Los Angeles, Las Vegas and San Diego.

Potential Commission Policy Statement on 25 Percent Renewable Energy by 2025

While Arizona's RES contains within it the nation's most ambitious distributed generation requirement, it is now among the lowest overall renewable energy requirements among all standards adopted. Significantly, all of the states that border Arizona now have renewable portfolio standards that are greater than Arizona's.¹⁵ Indeed, with an RES that sits at 15 percent, and the abundant land and sunshine that characterize the Grand Canyon state, it is becoming obvious that Arizona will be a net exporter of solar energy to surrounding states.

I believe the RES represents a strong first step toward diversifying our utilities' energy portfolios, but that a truly balanced portfolio demands more. That the state's largest electric utility has indicated in multiple forums it intends to exceed the RES, and that other states have surpassed Arizona in their renewable energy standards and goals, are indicators the RES should be considered a starting point, rather than a cul-de-sac. Ultimately, I believe the RES should and will be increased. A step toward increasing the RES through rulemaking would be the adoption of a formal policy statement by the Commissioners recognizing that the current RES establishes a "floor" for renewable energy in Arizona, but making clear that we believe prevailing circumstances provide ample impetus for utilities to go beyond 15 percent by 2025. Such a

¹³ See "Solar power plant on Phoenix landfill could benefit thousands," Sept. 20, 2009, Arizona Republic. <http://www.azcentral.com/business/articles/2009/09/20/20090920biz-phxsolar0921.html>.

¹⁴ See "Sempra Gen Aims To Build, Sell 500 MW Of Solar Power," September 30, 2009, Wall Street Journal.

¹⁵ The standards of our neighboring states are as follows: California, 20 percent by 2010; Nevada, 30 percent by 2025; New Mexico, 20 percent by 2020; Utah, 20 percent by 2020; Colorado 20 percent by 2020. (Note: Utah has a goal of 20 percent, rather than a standard.) Even a bit further away from Arizona, state standards are larger than Arizona's: Kansas, 20 percent by 2020; Oregon, 25 percent by 2025; Minnesota, 25 percent by 2025. See http://www.dsireusa.org/documents/SummaryMaps/RPS_map.ppt.

policy statement could indicate that the Commission will look favorably upon efforts by utilities to achieve 25 percent by 2025, and establish an expectation that Companies will target that amount.¹⁶

Potential Statewide Feed-in Tariff

As our experience with the RES grows, we have learned much regarding its successes and challenges. Recently, for instance, it has become evident that utilities conducting Requests for Proposals have been deluged with bids from entities wishing to install small to mid-sized renewable energy projects and sell their energy to a utility.¹⁷ A significant number of them have been deemed worthy of consideration by APS, and yet in response to APS' most recent RFP, the Company has chosen to select only two projects as winning bidders.¹⁸ Our experience after the adoption of the RES has taught us as well that there is significant interest on the part of homeowners and schools in deploying renewable energy projects, but that both schools and homeowners are facing difficulty in the current economy funding projects.¹⁹

Both of these challenges – ensuring that worthy renewable energy projects are funded and brought on-line, and facilitating robust residential and school solar programs – could be addressed through the development of an effective feed-in tariff at Arizona's regulated electric utilities.²⁰ Such a tariff could be adopted through a pilot program that could be targeted narrowly for use by schools, non-profits and governmental institutions, which have traditionally struggled to deploy solar because they are ineligible to receive the federal Investment Tax Credit. It could also be directed toward funding the kinds of small to mid-range, multi-megawatt renewable energy projects that hold so much promise but that have had difficulty finding a perch in the utilities' portfolios.

Additionally, a feed-in tariff could be utilized to encourage the strategic deployment of solar energy in areas of high growth, thus helping to achieve the kinds of infrastructure cost savings identified as possible by the *Distributed Renewable Energy Operating Impacts and Valuation Study* ("Valuation Study"), an illuminating study conducted for APS pursuant to Commission Order. Specifically, the Valuation Study determined that under a high penetration scenario for

¹⁶ While policy statements are not commonly used at the Commission, they have been deployed with maximum impact: the Commission's 2003 Policy Statement on Natural Gas Infrastructure, outlining our willingness to pre-approve the costs associated with a much needed new natural gas pipeline in Arizona, led five years later to the construction of the Transwestern Pipeline as a competitor to the then-monopoly gas provider, El Paso Natural Gas Company. See *ACC Policy Statement Regarding New Natural Gas Pipeline and Storage Costs*, http://www.cc.state.az.us/divisions/utilities/gas/natural_gas_infrastructure.pdf.

¹⁷ See testimony of APS witness Barbara Lockwood in Docket No. E-01345A-08-0172, transcript, Vol. VII, pages 1544-1545.

¹⁸ Id.

¹⁹ A debate developed among the Commissioners over whether these school projects should be counted as "residential" for purposes of retiring the Renewable Energy Credits ("RECs") associated with them, but there was no question about our support for deploying solar on Arizona schools, as evidenced by our decision to shift \$20 million over to the commercial distributed generation program at APS for use by schools in its service territory.

²⁰ See Valuation Study, R.W. Beck, January, 2009, pages 6-8 to 6-11.

solar rooftops, APS and its customers would, by the Year 2025, save \$7.8 million in capital reductions for distribution; \$13 million in capital reductions for transmission; \$35.2 million in capital cost reductions for generation; and \$202 million in total energy related and fixed operations and maintenance reductions. However, the Valuation Study also found that some of these cost reductions could only be achieved if solar is deployed to those areas in APS' service territory where the most explosive growth is expected to occur.²¹ Targeting distributed solar to areas of high growth through a feed-in tariff would be one way of speeding along utility infrastructure cost savings.

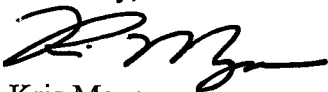
Feed-in tariffs have been adopted in several U.S. states, cities and several other nations, including California, Gainesville, Florida, Spain, and Germany, demonstrating a growing level of interest in them by policymakers.²² And they should appeal to Commissioners who in the past have indicated support for renewable energy projects only where they are financed through a performance based incentive. Feed-in tariffs are indeed paid out not up-front, like the more standard Up-Front Incentive – but rather based on the amount of energy they produce each month or year. If the Commission chooses to implement a feed-in tariff, it is my view that it should be additive to the RES.

Therefore, I would propose that the Commission take the following steps to examine how we can best effectuate an increase of the amount of renewable energy generated and consumed in Arizona:

- Initiate a Notice of Inquiry (“NOI”) followed by workshops to develop a Commission Policy Statement that would call on Arizona utilities to produce 25 percent of their retail sales from renewable resources by the year 2025. The NOI and workshops could then be followed by a Staff Report, and a Commission vote.²³
- Initiate a Notice of Inquiry followed by workshops to design a possible statewide feed-in tariff to be adopted by all regulated electric utilities. The workshops could lead to a Staff report, followed by implementation of a feed-in tariff through the utilities' annual RES Implementation Plans.

I look forward to discussing these proposals with you at an upcoming Staff meeting and welcome any comments you might have.

Sincerely,



Kris Mayes
Chairman

²¹ See Valuation Study, page 2-48.

²² See “Feed-in Tariffs Contemplated in U.S.,” February 9, 2009, New York Times. Several other states are now contemplating the adoption of a feed-in tariff, including Washington, Minnesota, Oregon, Indiana and Michigan.

²³ This procedure would roughly follow the one utilized by the Commission in its adoption of the Policy Statement Regarding New Natural Gas Pipeline and Storage Costs.

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